

REMARKS

Claims 11- 18 are pending and stand rejected.

Claim 1 has been amended to state that the structure in the claimed method contains as the sole barrier layer to alcohol containing fuels the layer containing the polyamide/polyolefin blend and carbon nanotubes. This amendment is supported by page 3, lines 6-10 of the original specification; and by the Examples, as shown in Table 1, in which the polyamide/polyolefin/CNT layer is the only barrier layer to the alcohols.

It is believed that no new matter is added by the amendments.

35 U.S.C. §112

Claims 11-18 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Specifically, the term “primary” barrier layer is alleged to find no support in the original specification. Applicant has amended the claims to remove the term “primary” in reference to the barrier layer.

35 U.S.C. §103(a)Jadamus in view of Nakajima and Chacko

Claims 11-18 stand rejected under 35 U.S.C. 103(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jadamus et al et al, US 6,090,459, in view of Nakajima (US 5,376,712) and further in view of Chacko (US 6,617,377).

The ‘459 reference fails to teach all of Applicant’s claim limitations, as amended, and therefore fails to present a *prima facie* of obviousness. Specifically, the ‘459 reference fails to teach the use of a polyamide/polyolefin blend having carbon nanotubes for use as the sole barrier layer for alcohol-containing fuels.

The Jadamus Examples all include a barrier layer – which is not surprising as Jadamus teaches the importance of a separate barrier layer (col. 2, lines 13-17) as an intermediate layer, and describes useful barrier layers (Col. 5, lines 1-8). In all but one of the Jadamus examples, barrier layers are a part of the construction – and in Example 5 (no barrier layer) the fuel leakage was not measured – only the impact resistance and the surface electrical resistance – which is the reason for the carbon fibers. There is no

teaching or suggestion in the Jadamus reference to use a combination of a blend having a polyamide matrix and a polyolefin with carbon nanotubes to act as a barrier layer for an alcohol-containing fuel.

The '459 reference teaches away from the use of a polyamide/polyolefin/carbon nanotube layer as an alcohol-fuel barrier layer, by teaching the use of an additional barrier layer (Col. 2, line 14-18) to serve as a fuel component barrier layer. Since the use of a polyamide/polyolefin/carbon nanotube layer was not recognized as a result-effective variable as a barrier layer, it cannot be optimized by routine experimentation (MPEP 2144.05).

Applicants have found that the proper blend of polyamide, polyolefin and carbon nanotubes can be used as the barrier layer of a multi-layer tube to impart barrier properties to alcohol-containing fuels. This use of the polyamide/polyolefin with carbon nanotubes as the barrier layer (and not just as an antistatic layer in combination with other barrier layers) distinguishes Applicant's invention from the Jadamus reference. While the Jadamus reference teaches the extra barrier layer – which adds cost and expense, Applicant's have found that a multi-layer hose can use the polyamide/polyolefin with carbon nanotubes as the main barrier layer, saving the expense of addition barrier layers.

Neither the Nakajima or Chacko references describe any barrier layer properties of carbon-nanotube containing plastics, and therefore fail to heal the defects in the '459 reference to teach or disclose all of Applicant's claim limitations

Since the cited references fail to present a *prima facie* case of anticipation or obviousness over the claims as amended, Applicant believes that the reasons for rejection have been overcome, and the claims herein should be allowable to the Applicant. Accordingly, reconsideration and allowance are requested.

Respectfully submitted,



Thomas F. Roland, Esq.
Attorney for the Applicants
Reg. No. 42,110

Date: July 29, 2008

Arkema Inc, Customer Number 31684